

FIRST RECORD OF *FISTULARIA COMMERSONII* (FISTULARIDAE) FROM THE CENTRAL MEDITERRANEAN

by

Ernesto AZZURRO (1), Paola PIZZICORI (2) & Franco ANDALORO (3)

RÉSUMÉ. - Premier signalement de *Fistularia commersonii* (Fistularidae), en Méditerranée centrale.

Un exemplaire de cornette à taches bleues, *Fistularia commersonii* (PT = 1150 g; LS = 104.5 cm), a été capturé sur les côtes de l'île de Lampedusa au sud-ouest de la Sicile. C'est le premier signalement de ce migrant lessepsien en Méditerranée centrale, une zone seulement atteinte par trois autres espèces de poissons lessepsiens. Le premier signalement de cornette à taches bleues a été fait en 2000 sur la côte d'Israël; actuellement, cette espèce s'est établie dans le bassin occidental. Cette capture montre la rapide extension de la distribution de la cornette à taches bleues et de son succès dans les habitats côtiers méditerranéens.

Key words. - Fistularidae - *Fistularia commersonii* - MED - Lampedusa - Lessepsian migrant - First record.

The bluespotted cornetfish *Fistularia commersonii* Rüppell, 1835 is a widely distributed Indo-Pacific species (Golani, 1999), recently included (Golani, 2000) among the 59 "Lessepsian" fish known today in the Mediterranean Sea (Golani *et al.*, 2002). It is commonly found among reefs but also over shallow sandy bottoms (Fischer and Bianchi, 1984). Very soon after its appearance, this cornetfish was considered established, i.e., having a self-maintaining population in the Mediterranean (CIESM, 2002). Up to now available records have been limited to the Eastern basin (Fig. 1), in the marine areas of Israel (Golani, 2000; Golani, 2002), Rhodes (Corsini *et al.*, 2002) and in the Antalya Bay, Turkey (Bilecenoglu *et al.*, 2002).

MATERIAL AND METHODS

On 20 December 2002, an adult female of *F. commersonii* (deposited at the Ancona University with the registration code: FCPP1) was captured by trammel net on the Eastern coast of

Lampedusa (Sicilian Strait, 35°29'N-12°36'E) at 12 meters of depth on a rocky bottom. The capture also included several juveniles of *Seriola dumerili* (Risso, 1810). Gonads were immediately extracted, weighted and portions of fresh ovarian tissue were observed under an optical microscope provided by a micrometric ocular. Due to the lack of a timely fixation of gonad tissue, histological analyses were useless to staging oocyte maturity.

The drawing was performed on the basis of the present specimen.

RESULTS

Description of the Lampedusa specimen (Fig. 2)

Body very elongated and depressed with a narrow tubular snout. Dorsal and anal fins both triangular with a similar appearance, opposing each other just in correspondence of the tail. Pectoral and pelvic fins small, caudal fin forked with the two middle rays forming a long filament. Scales and spinules absent, no body plates along midline of the back. Colour brownish to olive above, with rows of blue spots and a pair of blue stripes along back. Belly white, fins with orange cast, transparent at base.

Meristic formula: D, 15; A, 14; P, 14; V, 6. Total weight, 1150 g; standard length, 104.5 cm. Body depth, 3.78 cm (3.6% SL); maximum width, 6.32 cm (6.0% SL); head length, 36.9 cm (35.3% SL); snout, 27.9 cm (75.6% HL); eye diameter, 2.9 cm (7.8% HL); interorbital space, 1.4 cm (3.8% HL); caudal filament, 13.9 cm (13.3% SL). Diagnostic features of the individual accord with previous descriptions of the species (Fritzsche, 1976; Fischer and Bianchi, 1984; Heemstra, 1986; Golani, 2000).

The ovary

The ovary, of 13.5 g in weight, was a single orange-pink gonad slightly depressed, occupying all the body cavity in its length. Histological analyses showed the presence of two fused lobes, divided by a longitudinal septum of connective tissue continuous with the ovarian tunica. This description was confirmed by M. Corsini (personal communication). As observed by microscopic examination of fresh ovarian tissue portions, the gonad was composed of an asynchronous mixture of vitellogenic oocytes (220-570 µm) (Fig. 3), scattered among previtellogenic oocytes (70-125 µm). No signs of atresia were detected.

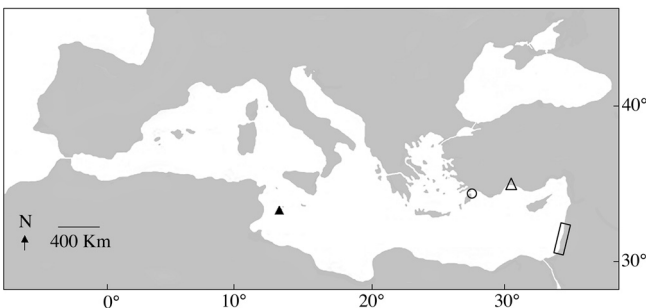


Figure 1. - Known distribution range of *Fistularia commersonii* in the Mediterranean Sea. □ = Israel (Golani 2000); ○ = Gulf of Trianda, Rhodes (Corsini *et al.*, 2002); △ = Antalya Bay, Turkey (Bilecenoglu *et al.*, 2002); ▲ = Lampedusa Island, Italy (present study).

(1) Marine Science Institute, University of Ancona, Via Breccie bianche, 60131 Ancona, ITALY. [eazzurr@tin.it]

(2) C.P. 34, 92010 Lampedusa, ITALY.

(3) ICRAM, via di Casalotti 300, 00166 Roma, ITALY.

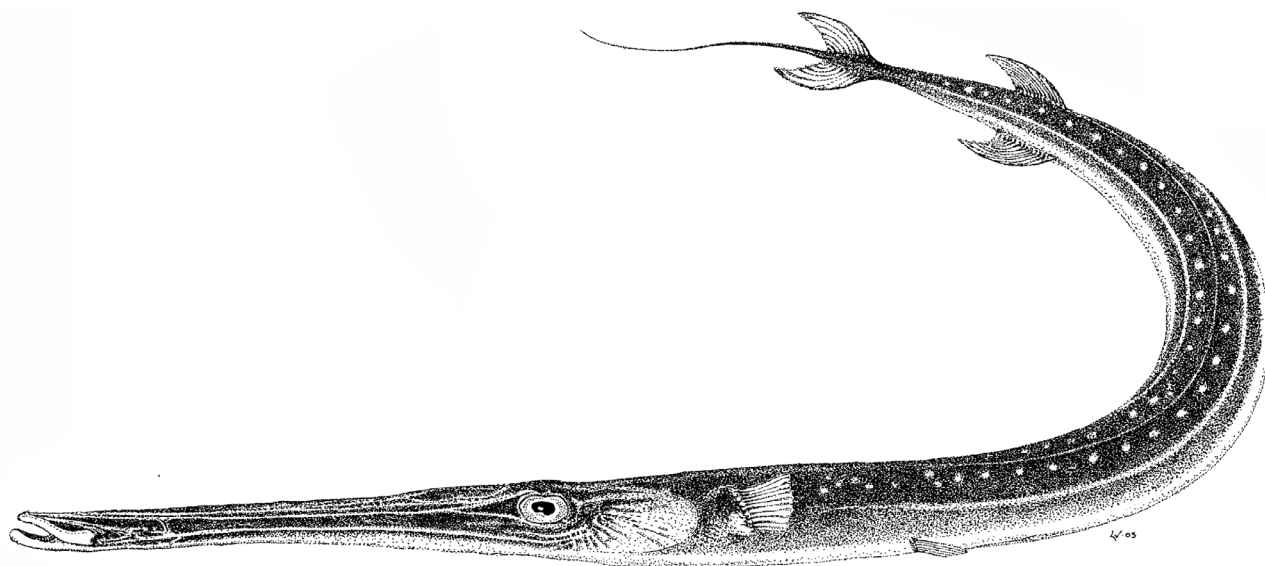


Figure 2 - *Fistularia commersonii*, 104.5 cm LS, Lampedusa Island, Central Mediterranean Sea (Drawing by L. Valdéz).

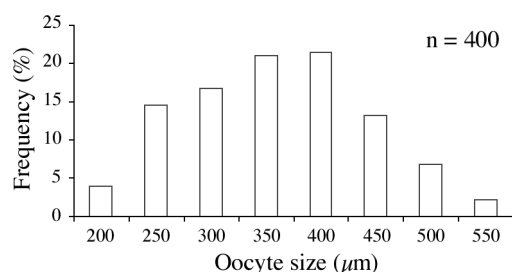


Figure 3. - Size-frequency distribution of vitellogenic oocytes in *Fistularia commersonii* as obtained by microscopic examination on fresh ovarian tissue.

DISCUSSION

Records of Indo-Pacific species from the Mediterranean areas increase continuously, following the biodiversity change and enrichment of the basin fish fauna. At present, 59 fish species, coming from the Red Sea, have likely passed into the Mediterranean through the Suez Canal, which represents the main route of invasion for alien species. Beside the importance of this process for the entire Mediterranean, the relative number, density and impact of Red Sea fishes remain mostly confined to Levantine waters (Quignard and Tomasini, 2002). At present, only three Lessepsian species have been recorded with certainty in the Central Mediterranean: *Stephanolepis diaspros* Fraser-Brunner, 1940; *Siganus luridus* Rüppel, 1828 and *Siganus rivulatus* Forsskal, 1775, plus other two species whose occurrence was supported by weaker data: *Leiognathus klunzingeri* (Steindachner, 1898) and *Sphyræna chrysotaenia* Klunzinger, 1884 (Golani *et al.*, 2002).

The Sicilian Strait is often considered as a limit to the Lessepsian migration and a sort of hydrological and biogeographic barrier for tropical affinity species (Quignard and Tomasini, 2002). The record of *F. commersonii* from this area brings to four the

number of Lessepsian fishes which have reached the Central Mediterranean, adding a new detail to the understanding of its zoogeographical role. Moreover, this capture followed only three years after the first record of the species along the Israeli coasts (Golani, 2000) and can be taken as a clear evidence of the rapid spreading of the bluespotted cornetfish towards the Western basin.

Lessepsian immigrants showed an uncontested tendency to extend their distribution in the Mediterranean area (Andaloro and Rinaldi, 1998) but often little is known on their biological features which, together with habitat characteristics, determine the establishment of a new species in a new area. Further observation of the reproductive conditions of this species could help us to understand its capacity for adaptation and invasive potentiality.

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